PFD, meeting the requirements of subpart 160.047 of this chapter, except that, in lieu of the weight and displacement values prescribed in Tables 160.047–4(c)(2) and 160.047–4(c)(4), each insert must have the minimum weight of kapok and displacement as shown in Table 160.077–2(j). To achieve the specified volume displacement, front and back insert pad coverings may be larger than the dimensions prescribed by

§160.047–1(b) and the width of the front fabric envelope and height of the back fabric envelope may be increased to accommodate a circumference no greater than 1/4" larger than the filled insert circumference. As an alternative, unicellular plastic foam inserts of the specified displacement and of an equivalent shape, as accepted by the Commandant, may be substituted for kapok inserts.

TABLE 160.077-2(j)—REFERENCE VEST MINIMUM KAPOK WEIGHT AND VOLUME DISPLACEMENT

Reference PFD type	Front insert (2 each)		Back insert	
	Minimum kapok weight g (oz)	Volume displace- ment N (lb)	Minimum kapok weight g (oz)	Volume displacement N (lb)
Devices for adults, weighing over 40 kg (90 lb):				
Type II, III, and V Recreational Devices for youths, weighing 23–40 kg (50–90 lb):	234 (8.25)	40±1 (9.0±0.25)	156 (5.5)	27±1 (6.0±0.25)
Type I	184 (6.5)		170 (6.0)	
Type II, III, and V¹	156 (5.5)	26±1 (5.75±0.25)	149 (5.25)	24±1 (5.5±0.l25)
Type I	128 (4.5)		156 (5.5)	30±1 (6.5±0.25)
Type II	100 (3.5)	1/±1 (3./5±0.25)	135 (4.75)	22±1 (5.0±0.25)

¹ Both Recreational and Commercial.

- (k) Second stage donning means adjustments or steps necessary to make a PFD provide its intended flotation characteristics after the device has been properly donned and then inflated
- (1) SOLAS lifejacket, in the case of a hybrid inflatable PFD, means a PFD approved as meeting the requirements for lifejackets in the 1983 Amendments to the International Convention for the Safety of Life at Sea, 1974 (SOLAS 74/83), in addition to the requirements of this subpart.

[CGD 78-174, 50 FR 33928, Aug. 22, 1985, as amended by CGD 78-174A, 51 FR 4351, Feb. 4, 1986; CGD 88-070, 53 FR 34536, Sept. 7, 1988. Redesignated and amended by CGD 78-174, 60 FR 2486, Jan. 9, 1995; 60 FR 7131, Feb. 7, 1995; CGD 95-072, 60 FR 50466, Sept. 29, 1995; CGD 96-041, 61 FR 50733, Sept. 27, 1996; USCG-2009-0702, 74 FR 49237, Sept. 25, 2009; USCG-2013-0671, 78 FR 60158, Sept. 30, 2013]

§160.077-3 Required to be worn.

(a) A Type V hybrid PFD may be used to meet the Coast Guard PFD carriage requirements of subpart 25.25 of this chapter, and 33 CFR part 175, only if the PFD is used in accordance with any requirements on the approval

- label. PFDs marked "REQUIRED TO BE WORN" must be worn whenever the vessel is underway and the intended wearer is not within an enclosed space.
- (b) If hybrid PFD's with the marking "REQUIRED TO BE WORN" are not worn under the conditions stated in paragraph (a) of this section, other approved PFD's will have to be provided to comply with the applicable carriage requirements in 33 CFR part 175 and subpart 25.25 of this chapter.
- (c) The following PFD's must be marked "REQUIRED TO BE WORN" as specified in §160.077–31:
- (1) Each Type V recreational hybrid PFD.
- (2) Each Type V commercial hybrid PFD.

[CGD 78–174, 50 FR 33928, Aug. 22, 1985. Redesignated and amended by CGD 78–174, 60 FR 2486, Jan. 9, 1995]

§ 160.077-4 Type.

(a) A hybrid PFD that successfully passes all applicable tests may be approved as a Type I, II, III, or V for various size ranges of persons weighing over 23 kg (50 lb), as Type I or II for persons weighing 14–23 kg (30–50 lb) or

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as Type I or II for other sizes. A Type V PFD has limitations on its approval.

- (b) The approval tests in this subpart require each Type V hybrid PFD to have at least the same performance as a Type I, II, or III PFD for adult and youth sizes or Type I or II PFD for child sizes.
- (c) A hybrid PFD may be approved for use on recreational boats, commercial vessels or both if the applicable requirements are met.

[CGD 78-174, 60 FR 2486, Jan. 9, 1995]

§ 160.077-5 Incorporation by reference.

- (a) Certain material is incorporated by reference into this part with the approval of the Director of the FEDERAL REGISTER in accordance with 5 U.S.C. 552(a). To enforce any edition other than that specified in paragraph (b) of this section, the Coast Guard must publish a notice of change in the FED-ERAL REGISTER and make the material available to the public. All approved material is on file at the Coast Guard Headquarters. Contact Commandant (CG-ENG), Attn: Office of Design and Engineering Systems, U.S. Coast Guard Stop 7509, 2703 Martin Luther King Jr. Avenue, SE., Washington, DC 20593-7509. You may also contact the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202–741–6030, or go to: http:// $www.archives.gov/federal_register/$ $code_of_federal_regulations$ /
- ibr_locations.html. All material is available from the sources listed below.
- (b) ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428–2959, 877–909–2786, http://www.astm.org.
- (1) ASTM B 117-97, Standard Practice for Operating Salt Spray (Fog) Apparatus, into §160.077-11.
- (2) ASTM D 751–95, Standard Test Methods for Coated Fabrics, incorporation by reference approved for §160.077–19.
- (3) ASTM D1434–82 (Reapproved 2009) ϵ^{1} , Standard Test Method for Determining Gas Permeability Characteristics of Plastic Film and Sheeting (approved May 1, 2009), incorporation by reference approved for §160.077–19.
- (c) DLA Document Services, 700 Robbins Avenue, Building 4/D, Philadel-

- phia, PA 19111–5094, 215–697–6396, http://assistdocs.com.
- (1) In Federal Test Method Standard No. 191 the following test methods:
- (i) Method 5100, Strength and Elongation, Breaking of Woven Cloth; Grab Method.
- (ii) Method 5132, Strength of Cloth, Tearing; Falling-Pendulum Method.
- (iii) Method 5134, Strength of Cloth, Tearing; Tongue Method.
- (iv) Method 5804.1, Weathering Resistance of Cloth; Accelerated Weathering Method.
- (v) Method 5762, Mildew Resistance of Textile Materials; Soil Burial Method.
- (2) Federal Standard No. 751, Stitches, Seams, and Stitching.
- (3) MIL-L-24611(SH), Life Preserver Support Package for Life Preserver, MK 4.
- (d) National Institute of Standards and Technology (NIST) (formerly National Bureau of Standards), 100 Bureau Drive, Stop 1070, Gaithersburg, MD 20899–1070, 301–975–6478, http://www.nist.gov.
- (1) "The Universal Color Language" and "The Color Names Dictionary" in Color: Universal Language and Dictionary of Names, National Institute of Standards Special Publication 440.
 - (2) [Reserved]
- (e) Underwriters Laboratories Inc. (UL), 12 Laboratory Drive, Research Triangle Park, NC 27709-3995, 919-549-1400, http://www.ul.com.
- (1) UL 1191, Components for Personal Flotation Devices.
- (2) UL 1517, Standard for Hybrid Personal Flotation Devices (November 12, 1984), incorporation by reference approved for 46 CFR 160.077–5(e)(2); 160.077–11(a)(5)(ii) and(g)(1); 160.077–15(b)(12); 160.077–17(b)(9); 160.077–19(a)(5) and (b)(1) through (18); 160.077–21(c)(1) through (5); 160.077–23(h)(4) through (7); 160.077–27(e)(1) and (4); and 160.077–29(c)(5), (7), and (9), and (d)(1) and (5).

[USCG-2012-0866, 78 FR 13251, Feb. 27, 2013, as amended by USCG-2013-0671, 78 FR 60158, Sept. 30, 2013]

§ 160.077-6 Approval procedures.

(a) *General*. Subpart 159.005 of this chapter contains the approval procedures. Those procedures must be followed, excepted as modified in this paragraph.